**Unit 5 (Cell Division): Topics, Objectives, and Specific Learning Targets**

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| **Topic** | **Objective** | **Specific Learning Target** | **Where did I learn this?**  (What resources should I use to study?) | **How well do I know this?**  (scale of 1 to 3, with 3 indicating a high level of understanding) |
| Organization of DNA | 1. I can describe the purpose of the organization of DNA in a eukaryotic cell into chromosomes | a. I can identify the parts of a chromosome. |  |  |
| b. I can explain why DNA copies and coils up into a chromosome before cell division. |  |  |
| Mitosis | 2. I can outline the steps involved in the formation of body cells in the process of mitosis. | a. I can explain why cells must divide when they get too large. |  |  |
| b. I can identify the stages in the normal life of the cell (aka the cell cycle). |  |  |
| c. I can explain and draw what happens in each stage of cell division (aka mitosis)—prophase, metaphase, anaphase, and telophase. |  |  |
| d. I can compare and contrast the division of the cytoplasm (aka cytokinesis) in plant vs. animal cells. |  |  |
| e. I can explain how mitosis is different from cell division in prokaryotic cells (aka binary fission). |  |  |
| Meiosis | 3. I can outline the steps involved in the formation of sex cells in the process of meiosis. | a. I can compare and contrast sexual and asexual reproduction. |  |  |
| b. I can explain and draw what happens in each stage of Meiosis I. |  |  |
| c. I can explain and draw what happens in each stage of Meiosis II. |  |  |
| d. I can describe how meiosis creates egg and sperm cells in humans. |  |  |
| Comparing Mitosis and Meiosis | 4. I can compare mitosis and meiosis in multicellular organisms. | a. I can compare the purpose of mitosis vs. meiosis. |  |  |
| b. I can compare the process of mitosis vs. meiosis. |  |  |
| c. I can compare the result of mitosis vs. meiosis. |  |  |